Testimony for the Michigan House Transportation Committee
June 21, 2007

Dr. Jonathan Fliegel, M.D.
Pediatrician, St. Joseph Mercy Medical System
Chair, Legislative Committee
Michigan Chapter, American Academy of Pediatrics

We strongly support Booster Seat Legislation

The Michigan Chapter of the A.A.P. comprises more than 1600 pediatricians in our state. Our mission is to promote the health, safety and well-being of all of our children. Along with our colleagues across the country, we wholeheartedly support car and car seat safety through legislation and other measures. Thus, we urge the members of Michigan House to pass the bills proposed: House Bills 4536, 4537 and 4538. We would join 38 states and the District of Columbia in having laws that require older children to use appropriate child safety seats.

Why do we support these bills? An Ounce of Prevention

1. Motor vehicle accidents are the leading cause of death and a major cause of injuries of children in Michigan and across the country.

2. Proper restraints work, but seat and shoulder belts alone are not enough for children. Booster seats are more effective in preventing head and other injuries in children ages 4 to 8.

3. The biggest barrier to proper booster seat use is lack of a state law: these bills would overcome that.

4. Booster seats are inexpensive. These bills also propose a fund to assist lower income families in purchasing car seats.

Boost MI KIDS

# Top Ten Reasons Why Michigan Needs a Booster Seat Law

1. Motor vehicle crashes are the leading cause of death for Michigan children ages 14 and under.

2. Safety belts are designed for adults, not children. A booster seat "boosts" a child up to help the adult safety belt fit correctly.

3. Children ages 4-8 using seat belts alone are 4 times more likely to suffer head/brain injury compared to those using child restraints. A booster seat makes them 59% safer than a safety belt alone.

4. As of January 2007, thirty-eight states have laws that require older children to use appropriate child safety seats, including booster seats.

5. Under the current child passenger safety law, Michigan is not eligible to receive over one million dollars in federal funding which could be used to provide education and free booster seats to low-income families.

6. A study conducted by the University of Michigan Transportation Research Institute in 2004 found that only 8.6% of Michigan children ages 4-8 were appropriately restrained in a booster seat.

7. The biggest barrier to proper booster seat use (as reported by parents in a 2004 statewide telephone survey) is a lack of a state law requiring use.

8. Children can be seriously injured when a safety belt doesn't fit correctly. A child should never place the shoulder belt behind their back or under their arm. The child would not have upper body protection and could suffer broken ribs and injuries to internal organs. The name for this is Seat Belt Syndrome.

9. Booster seats are available at many retail stores and cost as low as $15.00. That's the price of two adult movie tickets or a large pizza!

10. Children who have outgrown child safety seats with internal harnesses should be properly restrained in a belt-positioning booster seat until they are at least 8 years old, unless they are 4'9" tall.

Endorsed/Supported by: AAA Michigan, General Motors, Ford, DiamlerChrysler, American Academy of Pediatrics, Michigan Sheriffs Assoc., Michigan Health & Hospital Assoc., Michigan State Medical Society, State Farm Insurance, and many other organizations. Visit www.boostmikids.org for more information.

**Frequently Asked Questions about Booster Seats: Legislators**

**Q: Why can't kids just wear a seat belt?**

A: Vehicle seats and seat belts are designed for adult-size bodies that are at least 4'9" tall. A child can slip out from under a lap-only belt and be ejected. Their body may also fold in half (like a tube of toothpaste) during a crash. There is even a medical name for this, Seat Belt Syndrome. In a severe crash, lap belts have been shown to cause serious injury to the liver, spleen, and intestines. In some cases, the spinal cord can be damaged and the child can become paralyzed.

A lap/shoulder belt isn't the answer either. On young children, the lap belt tends to ride up over the soft abdomen, or tummy, and the shoulder belt may cross the neck or face. The solution is NOT to place the shoulder belt behind the child's back, or under the arm. The child then has no upper body protection and can suffer broken ribs and injuries to internal organs. With no upper body protection, there is also great potential for head injury. This is a very serious concern as the brain is the organ least likely to recover from injury.

**Q: How does a booster seat work?**

A: A booster seat helps raise a child up so that the adult lap and shoulder belt fit properly; the lap belt should be across the top of the thighs, and the shoulder belt should fit across the center of the child's shoulder and chest.

**Q: What types of booster seats are available?**

A. There are two basic types. A high-back booster seat has a back that protects a child against whiplash in cars with low vehicle seat backs/no headrests. No-back boosters (also known as backless boosters) are appropriate for vehicle seats that have a high back and head rest. Both types of seats are effective in protecting children in car crashes.

**Q: How effective are booster seats?**

A: Booster seats are extremely effective in preventing injuries in a crash. A child is 59 percent safer in a booster seat than a seat belt alone. A booster is 4 times more effective in preventing a head injury than a seat belt alone.

**Q: Are booster seats readily available?**

A: Booster seats are widely available at stores such as Target, Kmart, Toys R Us, and Meijer. They are also available on the Internet. Booster seats are very affordable. Backless booster seats can be purchased for as low as

$15.00. That's the price of two adult movie tickets or a large pizza! High-back boosters can be purchased for as low as $30.00. Furthermore, there are many car seats available that convert from a toddler seat to a booster seat so no additional seat needs to be purchased.

**Q: What happens when a parent carpools or another person picks up the kids?**

A: This is no different than any other parenting issue. The safety of the child is the first consideration. The laws of physics in a crash still apply if the person is picking up the child only once or going a short distance. Booster seats are very important in keeping a child safe. Since a booster seat is small and relatively light, it can transfer easily between one vehicle to another. Booster seats are inexpensive so having a booster in both vehicles should not be a huge monetary consideration or hardship. As mentioned previously, the price of a booster is equivalent to the price of two adult movie tickets or a large pizza.

**Q: What if we pass a law and a family can't afford a booster seat?**

A: There are many opportunities for Michigan families in need. Many child safety seat fitting stations will be able to supply a booster seat and many other organizations have large quantities of booster seats for families. A complete list is being developed.

**Q: What are other states doing?**

A: Many states are making their child passenger safety laws more comprehensive. All children should be appropriately covered. As of January 2007, 38 states and the District of Columbia had passed booster seat laws. Included in this list are our neighbors, Indiana and Illinois.

**Q: When can a child ride in an adult seat belt?**

A: A child can ride safely in a seat belt when it fits right, typically when the child is at least 4'9" tall and 8 years old.

The seat belt fits correctly when:

1. the child can sit with their bottom against the seat back for the entire car ride;
2. the child can bend their knees over the edge of the vehicle seat without slouching;
3. the lap belt stays low on the hips and over the top of the thighs and does not move up on to the abdomen or tummy; and
4. the shoulder belt crosses the center of the shoulder and chest, not the neck or face.


**Child Passenger Safety Resources in Michigan That Provide Education and/or Free or Low-Cost Child Restraints**

| Name of Organization | County |
|---|---|
| AAA Bay City | Bay |
| AAA Birmingham | Oakland |
| AAA Canton | Wayne |
| AAA Livingston | Livingston |
| AAA Michigan - Charlevoix | Charlevoix |
| AAA Michigan - Midland | Midland |
| AAA Michigan - Plymouth | Wayne |
| AAA Muskegon | Muskegon |
| AAA Sterling Heights | Macomb |
| AAA West Bloomfield | Oakland |
| Allegan County Sheriff | Allegan |
| Alpena County Sheriff | Alpena |
| Alpena P.D. | Alpena |
| Bay City Police Department | Bay |
| Bay County Sheriff Office | Bay |
| Birmingham Police Department | Oakland |
| Branch-Hillsdale-St. Joseph Comm Hlth Agy | Branch,Hilldale, St. Joseph |
| Bronson Methodist Hospital | Kalamazoo |
| Children's Hospital of Michigan | Wayne |
| Clinton Township Police Department | Macomb |
| Delta/Menominee District Health Department | Delta & Menominee |
| Devos Children's Hospital | Kent |
| District Health Department No. 10 | Oceana |
| Early Headstart | Genesse |
| East Lansing Police Department | Clinton |
| Elhart Dodge, Inc. | Emmet |
| Emmet County Sheriff | Jackson |
| Extreme Dodge - Dodge Truck, Inc. | Oakland |
| Farmington Hills Fire Department | Midland |
| Feeny C-P-D of Midland, Inc. | Wayne |
| Flat Rock Police Department | Wayne |
| Ford Motor Company | |
| Grand Haven Public Safety | Ottawa |
| Grand Rapids Community College P.D. | Kent |
| Grand Rapids Police Department | Kent |
| Grandville Fire Department | Ottawa |
| Grandville Police Department | Ottawa |
| Harrison Township Fire Department | Clinton |
| Hurley Medical Trauma Services | Genessee |
| Ishpeming Police Department | Marquette |
| Jackson County Health Dept. | Jackson |
| Kalamazoo Department of Public Safety | Kalamazoo |
| KalKaska County Sheriff Office | KalKaska |
| Kelley Adams, Ford Motor Company | Wayne |
| Kentwood Police Department | Kent |
| Keweenaw Memorial Medical Center | Keweenaw |
| Lakeshore SAFE KIDS (2 locations) | Ottawa |

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|---|---|
| Lenawee County Health Department | Lenawee |
| Lenawee United Way | Lenawee |
| Lenox Township Fire Department | Lenawee |
| Lowell Police Department | Kent |
| Macomb County Health Department | Macomb |
| Macomb County Sheriff's Department | Macomb |
| Marquette City Fire Department | Marquette |
| Marquette County Health Department | Marquette |
| Marquette County Sheriff's Department | Marquette |
| Marquette General Health System | Marquette |
| Mason Police Department | Ingham |
| Mattawan Police Department | Van Buren |
| MedStar Ambulance | Van Buren |
| Melton Motors Volkswagen | Macomb |
| Mercy General Health Partners | Muskegon |
| Meridian Township Police | Clinton |
| Michigan Department of Community Health | State Coverage |
| Michigan State Police Office of Highway Safety Planning | State Coverage |
| Michigan EN CARE/MCGH | Macomb |
| Michigan State Police - Bay City | Bay |
| Michigan State Police - East Tawas | Iosco |
| Michigan State Police - Hart | Oceana |
| Michigan State Police - Iron Mountain | Dickenson |
| Michigan State Police - Kalkaska | Kalkaska |
| Michigan State Police - Mt. Pleasant | Isabella |
| Michigan State Police - Nagaunee | Marquette |
| Michigan State Police - Niles | Berrien |
| Michigan State Police - Oak Park | Oakland |
| Michigan State Police - Paw Paw | Van Buren |
| Michigan State Police - Petoskey | Emmet |
| Michigan State Police - Reed City | Osceola |
| Michigan State Police - Rogers City | Presque Isle |
| Michigan State Police - Wayland Post | Allegan |
| Michigan State Univeristy Extn - Huron Co | Huron |
| Michigan Resource Ctr for Health & Safety | State Coverage |
| Midland Police Department | Midland |
| Mott Children's Hospital | Washtenaw |
| MSP Niles Post | Berrien |
| MSU Extension - Grand Traverse | Grand Traverse |
| Mt. Clemens General Hospital | Macomb |
| Munson Medical Center | Grand Traverse |
| New Baltimore Police Department | Macomb |
| Northern Michigan Hospital Association | Emmet |
| Norton Shores Fire Department | Muskegon |
| Novi Police Department | Oakland |
| Oakland University Police Department | Oakland |
| Oakwood Healthcare System | Wayne |
| Oceana County Sheriff's Office | Oceana |
| Oshtemo Fire Station #2 | Kalamazoo |
| Ottawa County Sheriff | Ottawa |
| Portage Health System | Kalamazoo |
| Program Professionals, Inc. | Wayne |
| Ralph Thayer Volkswagen | Monroe |
| Rambling Road Pediatrics | Kalamazoo |
| Richmond Police Department | Macomb |

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|---|---|
| Roseville Fire Department | Macomb |
| Safe Kids Capital Area | Ingham, Eaton |
| Royal Oak Fire Dept. | Oakland |
| Safe Kids Berrien Co. | Berrien |
| Safe Kids Branch-Hillsdale-St. Joseph | Branch,Hilldale, St. Joseph |
| Safe Kids Calhoun Co. | Calhoun |
| Safe Kids Clinton County | Clinton |
| Safe Kids Copper Country | Houghton, Keweenaw |
| Safe Kids Greater Grand Rapids | Kent |
| Safe Kids Greater Flint | Genesee |
| Safe Kids Greater Lapeer Co. | Lapeer |
| Safe Kids Greater Thumb Area & Saginaw | Sanilac, Huron, Tuscola, Saginaw |
| Safe Kids Jackson Co. | Jackson |
| Safe Kids Kalamazoo Co. | Kalamazoo |
| Safe Kids Lenawee Co. | Lenawee |
| Safe Kids Macomb Co. | Macomb |
| Safe Kids Marquette-Alger Co. | Marquette, Alger |
| Safe Kids Metro Detroit | Wayne, Macomb, Oakland |
| Safe Kids Montcalm Co. | Montcalm |
| Safe Kids Muskegon Co. | Muskegon |
| Safe Kids Newaygo Co. | Newaygo |
| Safe Kids Northwest Michigan | Emmet, Charlevoix, Antrim, Otsego |
| Safe Kids North Shore | Benzie, Grand Traverse, Leelanau |
| Safe Kids St. Clair Co. | St. Clair |
| Safe Kids Van Buren Co. | Van Buren |
| Safe Kids Washtenaw Co. | Washtenaw |
| Safe Kids Westshore | Mason, Lake, Oceana |
| Safe Kids Wexford-Missaukee Co. | Wexford, Missaukee |
| Saginaw Chippewa Indian Tribe | Isabella |
| Saginaw County Department of Health | Saginaw |
| Sandusky Fire Hall | Sanilac |
| Sandusky Police Dept. | Sanilac |
| Shelby Township Police Department | Oakland |
| Sinai-Grace - DMC | Oakland |
| Southfield Chry-Ply-Jeep-Eagle | Oakland |
| Sparrow Health System | Ingham |
| St. John Health System - North Shores Hospital | Clinton |
| St. Joseph County Sheriff | Berrien |
| St. Mary Mercy Hospital | Livingston |
| Sterling Area Health Center | Arenac |
| Sterling Heights P.D. | Macomb |
| Sturgis Police Department | Macomb |
| Tecumseh Police Department | Lenawee |
| Thomas Motors, Inc. | Roscommon |
| Traffic Safety Association of Macomb | Macomb |
| U.P. Office of Highway Safety Planning Office | Upper Peninsula |
| UM Mott Children's Hospital | Washtenaw |
| Utica Police Department | Macomb |
| Van Buren/Cass District Health Department | Van Buren & Cass |
| Wayne State University Police Department | Wayne |

Patricia Herndon, State Farm Insurance

Michigan House Transportation Committee
Thursday, June 21, 2007

Thank you Chairman Hopgood and Transportation Committee members for allowing this written support of this child passenger safety legislation. State Farm has a long commitment to making our roads safer for our customers as well as families across Michigan. We feel it is our responsibility to be leaders in raising public awareness of auto safety issues.

State Farm-the country's leading auto insurer and Children's Hospital of Philadelphia (CHOP) - the country's leading pediatric hospital have formed the largest child-focused motor vehicle crash surveillance system in the world called Partners for Child Passenger Safety. This partnership began in 1997 and continues today. Our research monitors children in car crashes learning how and why they are injured. To date Partners for Child Passenger Safety has collected information on more than 455,000 crashes involving more than 669,000 children.

The accompanying attachments present relevant data from our research, which addresses the prevalence of inappropriate restraint and why booster seats are necessary for our Michigan youth. The inappropriate restraint of children ages 4-8 in motor vehicle crashes is in epidemic proportions. NHSTA recommends that children remain restrained in a booster seat until at least 8 years-old or until they reach the height of 4'9".

Currently, 38 other states and the District of Columbia have booster seat/child restraint laws in place. Studies show a significant drop in usage of appropriate restraints beginning at age of four. Our studies show that if a child between the ages of 4-8 is not in booster seat (only 24%) the most common type restraint used is a seat belt. CHOPs studies show this is very dangerous for the child. By age 7 very few children are in booster seats and use only the adult seat belt.

Generally, parents are doing a good job of restraining infants and toddlers, but children 4-8 remain inappropriately restrained in adult seat belts putting them at high risk of head and internal injuries should a crash occur.

Please refer to the attached graph showing Injuries to Children by Age Group noting the significant rise in injuries from the age 0-3 to the ages 4-8. I have also included attachments showing dramatic simulations of a 6-year-old in a booster seat vs. lap belt and a booster seat vs. a lap and shoulder belt. Finally, please refer to the graph showing Risk of Abdominal Injury for Child Occupants in Crashes. Note the spike in percentage of abdominal injuries for the booster seat age children compared to the percentage of optimally restrained for the same age group.

The majority of the cars in collisions have one passenger most commonly 0-8 years-old and that the crash occurs within 7 minutes of the family residence traveling at speeds from 25-45 mph. These injuries are not happening on the highways but rather on the side streets, running errands, dropping off to and from school and going to the local playground.

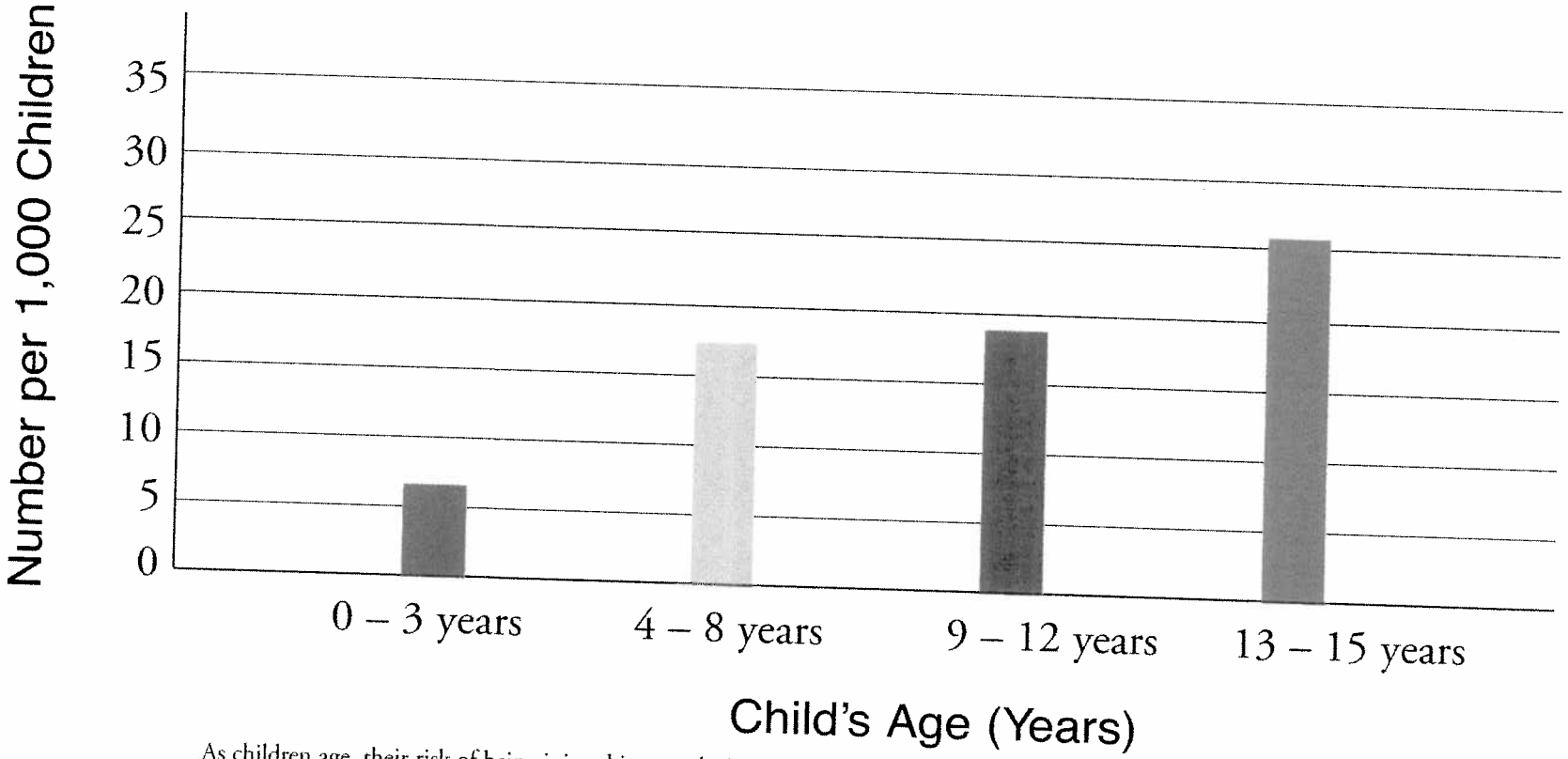
Unfortunately many of these crashes cause injury to the child, the most common and significant is to the child's head and neck. Injuries to the child's growing brain can result in a lifetime of disabilities. Other injuries include; spine, shoulder and rib fractures, resulting from excessive upper body and head movement during a crash due to inappropriate restraint, like using an adult seat belt on a child 4-8 years of age.

Recently published research from the Partners for Child Passenger Safety shows that since 1998 booster seat use has increased by 75% each year. While the use of booster seats is still dangerously low—only 20% compliant –the trend demonstrates that motivated parents are receptive to booster seat use.

As a representative of State Farm and mother of a four and six year old, thank you Chairman Hopgood and the Transportation Committee members as well as those involved with drafting and sponsoring this legislation that will save lives and prevent serious injury to the children of Michigan.

# Injuries to Children by Age Group: 2005

Partners for Child Passenger Safety
State Farm Insurance Companies
The Children's Hospital of Philadelphia




As children age, their risk of being injured in a crash rises. This is likely associated with high rates of child-restraint use for the youngest childrenand shows the need for age appropriate restraint in older children. Restraints include car safety seats, booster seats and lap/should seat belts.



Source: PCPS Fact and Trent Report 2005
*Chart updated to include 2005 data.*

# Restraint of a 6-year-old Child in a Motor Vehicle Crash: Booster Seat vs. Lap Belt

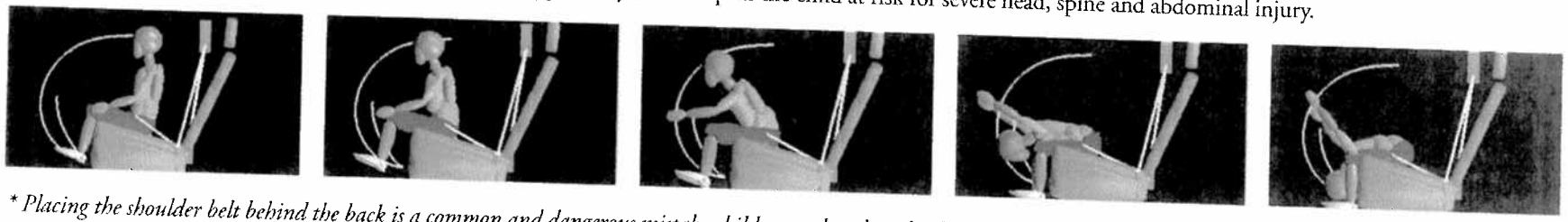
Partners for Child Passenger Safety
State Farm Insurance Companies
The Children's Hospital of Philadelphia

## Key Safety Message

Children who have outgrown child safety seats with internal harnesses should be properly restrained in a belt-positioning booster seat until they are at least 8 years old, unless they are 4'9" tall.

**Correct Restraint**–This simulation below shows how a 6-year-old child properly restrained in a belt-positioning booster seat barely moves during a 35 m.p.h. crash.

**Incorrect Restraint**–The same child, improperly restrained in an adult seat belt with the shoulder belt behind the back*, is thrown forward dramatically in the same crash. The inappropriate fit of the seat belt and lack of upper body restraint puts the child at risk for severe head, spine and abdominal injury.



** Placing the shoulder belt behind the back is a common and dangerous mistake children make when the shoulder belt doesn't fit properly.*

# Restraint of a 6-year-old Child in a Motor Vehicle Crash: Booster Seat vs. Lap and Shoulder Belt

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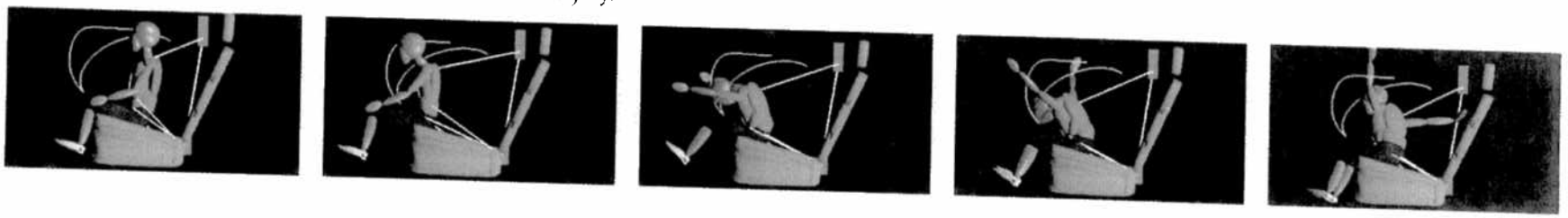
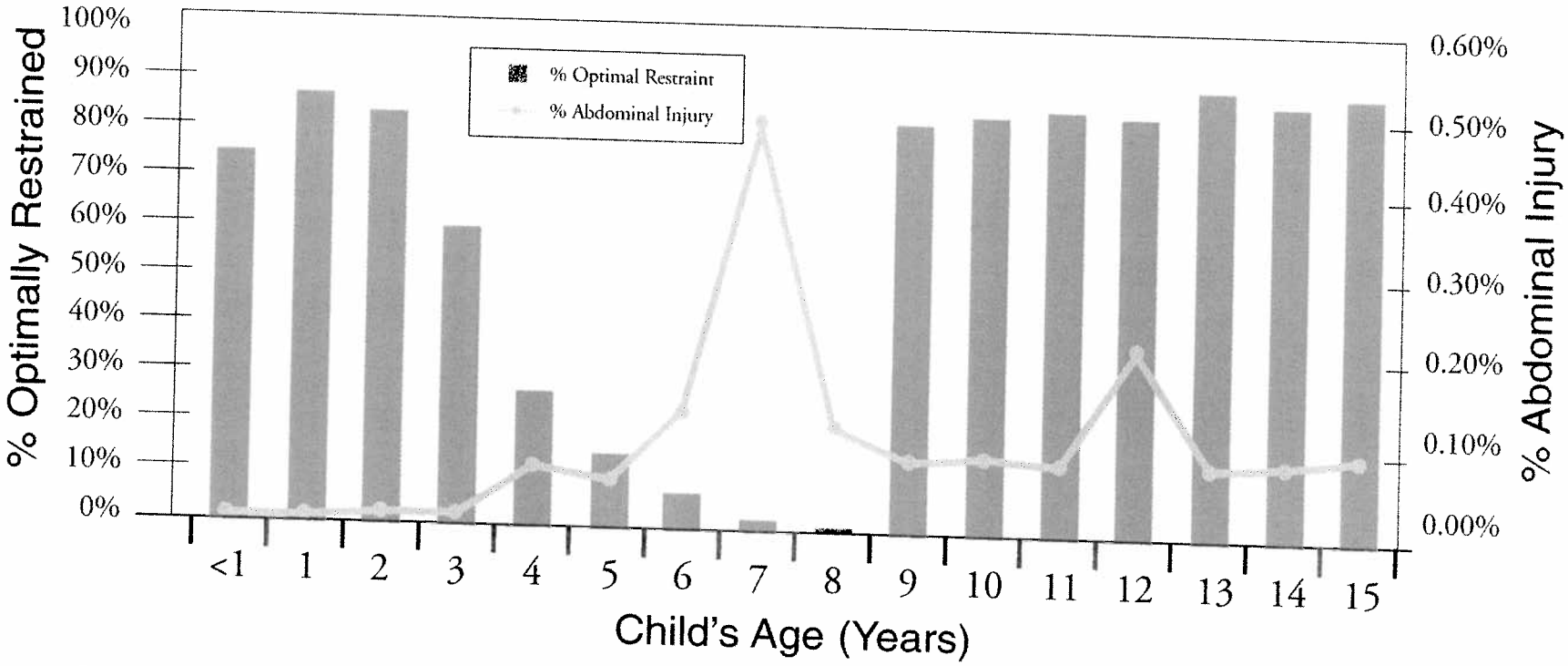


# Risk of Abdominal Injury for Child Occupants in Crashes

Partners for Child Passenger Safety
State Farm Insurance Companies
The Children's Hospital of Philadelphia



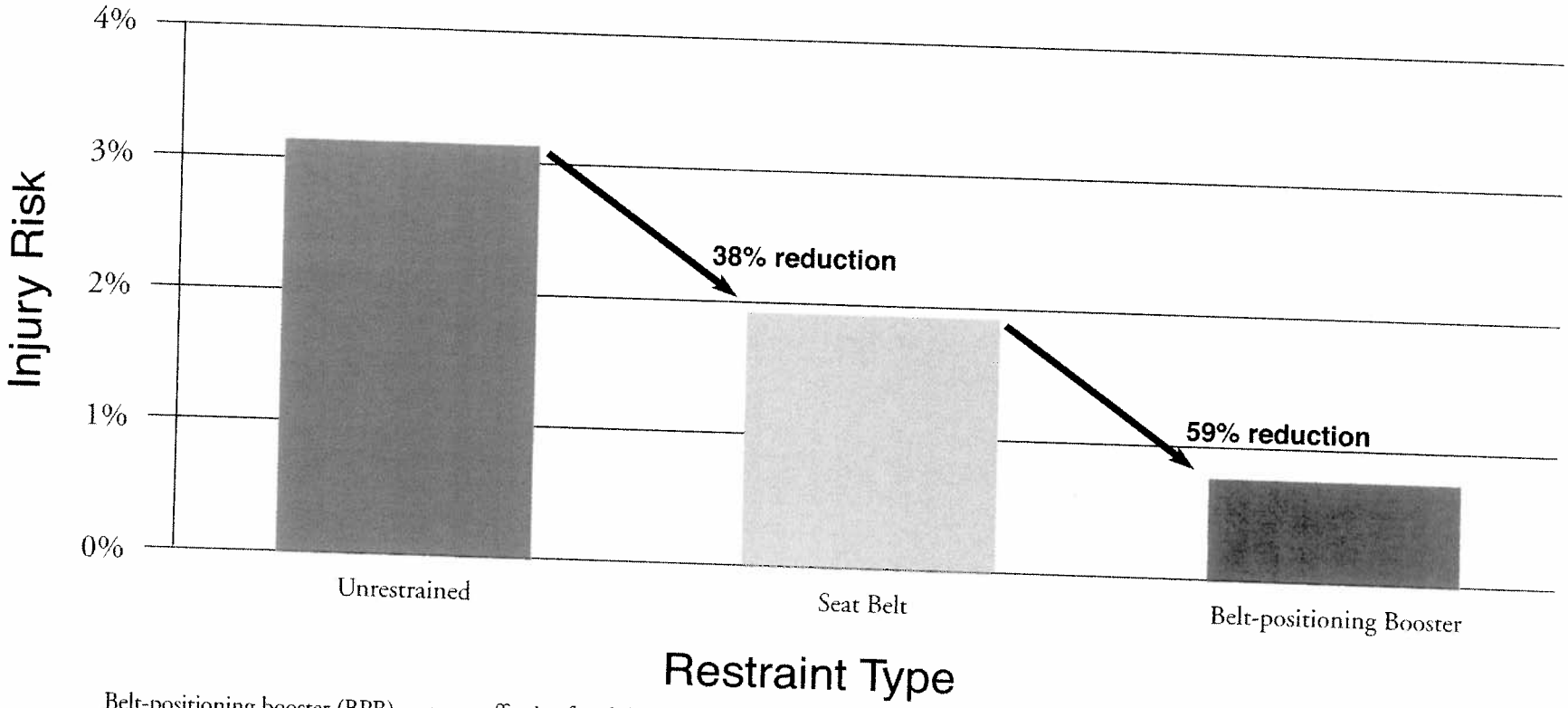

For all study participants between 1999 and mid-2002, PCPS noted a sudden drop in optimal restraint use beginning at age 3. The lowest optimal restraint use was recorded for children ages 4 to 8, who were also at the highest risk for abdominal injury. Among this age group, children in suboptimal restraints (adult seat belts) were more than three times as likely to sustain an abdominal injury compared to children in optimal restraints (belt-positioning booster seats).



Source: "Optimal Restraint Reduces the Risk of Abdominal Injury in Children Involved in Motor Vehicle Crashes," *Annals of Surgery*, January 2004

# Effectiveness of Belt-positioning Booster Seats in Preventing Injury for 4- to 8-year-olds.

Partners for Child Passenger Safety
State Farm Insurance Companies
The Children's Hospital of Philadelphia




Belt-positioning booster (BPB) seats are effective for children though at least age 7. Using a BPB with a seat belt instead of a seat belt alone reduces a child's risk of injury by 59 percent. Once a child has outgrown her child safety seat with harness, she should be restrained in a belt-positioning booster seat until she reaches a height at which an adult seat belt fits properly, usually around 4'9".



Source: "Belt-positioning Booster Seats and Reduction of Risk of Injury in Vehicle Crashes," *JAMA*, June 4, 2003.